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Substance Abuse Among High-Risk Sexual Offenders: Do Measures of Lifetime History of Substance Abuse Add to the Prediction of Recidivism Over Actuarial Risk Assessment Instruments?

Jan Looman[1] and Jeffrey Abracen[2]

Abstract

There has been relatively little research on the degree to which measures of lifetime history of substance abuse add to the prediction of risk based on actuarial measures alone among sexual offenders. This issue is of relevance in that a history of substance abuse is related to relapse to substance using behavior. Furthermore, substance use has been found to be related to recidivism among sexual offenders. To investigate whether lifetime history of substance abuse adds to prediction over and above actuarial instruments alone, several measures of substance abuse were administered in conjunction with the Sex Offender Risk Appraisal Guide (SORAG). The SORAG was found to be the most accurate actuarial instrument for the prediction of serious recidivism (i.e., sexual or violent) among the sample included in the present investigation. Complete information, including follow-up data, were

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available for 250 offenders who attended the Regional Treatment Centre Sex Offender Treatment Program (RTCSOTP). The Michigan Alcohol Screening Test (MAST) and the Drug Abuse Screening Test (DAST) were used to assess lifetime history of substance abuse. The results of logistic regression procedures indicated that both the SORAG and the MAST independently added to the prediction of serious recidivism. The DAST did not add to prediction over the use of the SORAG alone. Implications for both the assessment and treatment of sexual offenders are discussed.

Keywords

sex offenders, alcohol abuse, drug abuse

The purpose of the present investigation was to examine whether measures of substance abuse add to the prediction of sexual recidivism over and above the use of more traditional actuarial risk-assessment instruments alone. Hanson (2006) has argued that substance abuse may be viewed as an acute dynamic risk factor for sexual offence recidivism. That is, substance use/abuse may be linked quite closely in time to recidivism among offenders released into the community. Although research clearly supports this assertion (e.g., Begin, Weekes, & Thomas, 2006; see also Douglas & Skeem, 2005 for a discussion of the work conducted by Mulvey et al.) lifetime history of substance abuse may also represent an important dimension that, when assessed, can add to prediction of risk. Whether lifetime history of substance abuse, as assessed by standardized psychometric instruments, adds to the prediction of actuarially assessed risk using more traditional risk-assessment instruments (e.g., The Hare Psychopathy Checklist–Revised or PCL-R) has not received a great deal of attention in the literature to date. There are a variety of well-regarded actuarial risk-assessment instruments that incorporate information regarding substance use (e.g., the SORAG incorporates several questions in relation to the use of alcohol). However, the items typically included in these measures do not represent an assessment of severity of substance use/abuse, only whether alcohol or drugs were related to problematic behavior.

Research supports the assertion that lifetime history of substance abuse is related to both current usage and the prediction of future dangerousness. It is well known, for example, that there are very high rates of relapse to substance abuse among persons with a prior history of such abuse. In fact, one reason that harm reduction strategies have become so popular in the addictions field is that the goal of complete abstinence in the case of substance abusing populations may be unreasonable at least in the relatively short term (see Marlatt, 1998 for

a discussion). Among the theoretical contributions to the addictions field that harm reduction has provided is the understanding that lapses into alcohol and drug use can and do occur, in some cases even after years of abstinence. An important focus of treatment is to reduce the frequency and severity of these so-called lapses.

With reference to offender populations more specifically, Andrews and Bonta (2003) have argued that substance abuse is an important criminogenic need. Andrews and Bonta (2003) describe criminogenic needs as relating to issues that have been associated with criminal behavior and which are potentially amenable to change. Such criminogenic needs are viewed as dynamic given the possibility of change. Dynamic needs lie in contrast to static risk factors (e.g., age at current offence, gender) which are not amenable to change. With reference to the assessment of dynamic risk, the fact that the behavior may be changeable does not negate the possibility that the behavior has also been chronic. For example, an offender may have repeatedly come into contact with the legal justice system while under the influence of alcohol; however, with treatment the frequency and severity of both his drinking and criminal behavior may decrease substantially.

The question as to whether alcohol/drug abuse are causally related to criminal behavior has been the subject of much debate in the literature. Boles and Miotto (2003), in a review of the literature related to substance abuse and offending, have suggested that alcohol abuse may be causally related to violent behavior. In a review related to alcohol and intimate partner violence, Klostermann and Fals-Stewart (2006) have argued that the best evidence supports a causal link between alcohol and violence within relationships. Boles and Miotto (2003) note that the role of other drugs (e.g., opioid use) in relation to violence has been less clearly demonstrated.

Although some authors have debated whether alcohol/drug abuse are causally related to violent behavior (e.g., Testa, 2002) the fact that there is a strong association between alcohol/drug abuse and offending is irrefutable. Langevin, Langevin, Curnoe, and Bain (2006) have shown, for example, that both alcohol and drug abuse are quite common in sex offender populations. These authors used a large population of sexual offenders/individuals with sexual disorders consisting of more than a thousand men available in a forensic database. These authors observed that alcohol abuse was considerably more common among sex offenders than drug abuse. The authors note, with reference to alcohol abuse, that relative to the population of Canada in general where the incidence of alcoholism is approximately 3%, the incidence of serious problems related to alcohol among the sex offenders included in their research was approximately 50%. Interestingly, the authors note a surprisingly

small number of participants in their sample of sex offenders who reported problems with only drug abuse (n = 8). Kingston, Firestone, Wexler, and Bradford (2008) examined a sample of 295 incest offenders to determine which factors distinguished between recidivistic and nonrecidivistic incest offenders. The authors observed that, among both violent and criminal recidivists more generally, alcoholism was more of a problem than among nonrecidivists. Långström, Sjöstedt, and Grann (2004) have also demonstrated that a history of a diagnosis of alcohol abuse more than doubled the risk of recidivism among their sample of offenders. Furthermore, Baltieri and Guerra de Andrade (2008) investigated various groups of sexual offenders and observed that between 30% and 43% of the sexual offenders reported alcohol problems on the CAGE, a four-item instrument designed to measure severity of alcohol abuse. Felson, Burchfield, and Teasdale (2007), in a very informative study, found that in 36% of sexual assault incidents the offender was using alcohol but no other drug. The authors note, however, that even this high percentage clearly represents an underestimate of the actual rate at which alcohol use by the perpetrator was related to sexual assault as many victims (who provided the information used in the study) could not recall if the offender had been drinking at the time of the offence.

As noted above, the idea that substance abuse is related to sexual offence recidivism is hardly new (see also Christie, Marshall, & Lanthier, 1979; Rada, 1975 for earlier studies on the association). Nonetheless, as pointed out by Testa (2002) in her review of the relevant literature, past studies have been limited by only indirectly assessing the relationship between substance abuse and sexual offending. As well, Testa (2002) noted that very few studies related to sexual offending have been conducted using incarcerated samples. The lack of research on incarcerated samples is certainly problematic for a variety of reasons. For example, it is not clear that research on university students or community samples applies directly to samples of offenders incarcerated specifically for sexual offences. There have been a number of studies in relation to sexual assault using community samples that have demonstrated an association between either perpetrator use of alcohol/drugs or victim use of alcohol or drugs at the time of the offence (e.g., Abbey, 1991; Pernanen, 1991). However, it is possible that the factors related to coercive sexual behavior in community samples that have not come to the attention of the law may differ from those of offender samples, particularly those that have repeatedly come into contact with the law.

In a series of studies conducted by our team (Abracen, Looman, & Anderson, 2000; Abracen, Looman, Di Fazio, Kelly, & Stirpe, 2006; Looman, Abracen, Di Fazio, & Maillet, 2004), we have demonstrated that incarcerated sexual offenders experience significantly higher levels of alcohol abuse as

measured by the Michigan Alcohol Screening Test (MAST) when compared to groups consisting of violent nonsexual offenders. As well, we have shown that, among sexual offenders with significant histories of alcohol abuse, those who complete both substance abuse programming and sexual offender treatment recidivate at significantly lower rates than offenders who only complete sexual offender treatment (Abracen et al., 2006). These studies have all been conducted on samples of high-risk (as assessed by actuarial instruments) and/or high-need sexual offenders attending treatment at the Regional Treatment Centre Sex Offender Treatment Program (RTCSOTP). The RTCSOTP is operated by Correctional Service of Canada (CSC) and functions as a maximum security unit within a psychiatric facility operated by the Canadian federal penitentiary system. Comparison samples of nonsexual offenders have consisted of violent offenders who have been assessed for, and/or attended treatment related to, persistent violence (typically defined as having three or more violent convictions on the offender's official record). These offenders were also under the jurisdiction of CSC and were housed within Canadian federal penitentiaries.

With reference to drug abuse, we have observed an inconsistent pattern of findings with some of our research indicating that sexual offenders experience significantly lower levels of drug abuse when compared to violent nonsexual offenders (Abracen et al., 2000) and other studies indicating that there are no differences between groups. We have previously argued (Abracen & Looman, 2004) that the pattern of substance abuse seen in sexual offenders may be partially explained by research indicating that alcohol abuse (but not drug abuse) is closely associated with negative emotionality. Marshall (1989, 1993) and his group have hypothesized that intimacy deficits and associated negative emotionality may be of etiological significance with reference to sexual offending. In specific, Marshall and his colleagues have suggested that the intimacy deficits frequently observed in sexual offenders may be related to underlying patterns of insecure attachment. These insecure patterns of attachment may be related to the formation of both intimacy deficits and negative emotionality more generally. One advantage of this perspective is that it links the development of sexually abusive behavior to one of the most thoroughly researched theories of personality development, that is, attachment theory. Our findings, and other data linking alcohol use and abuse to sexual offending, may provide a link between two empirically supported dynamic (that is, changeable) risk factors associated with sexual offending (i.e., intimacy deficits/negative emotionality and alcohol abuse). That is, alcohol abuse may be associated with negative emotionality and that negative emotionality (which is possibly exacerbated by alcohol abuse) may increase the likelihood of someone engaging in unwanted sexual behavior. The physiological effects of

alcohol use (e.g., impaired ability to think abstractly) may further increase the likelihood of problematic behavior in persons who might otherwise be at risk for such behaviors (e.g., Steele & Josephs, 1990). It certainly seems reasonable to assume that convicted sexual offenders might be at elevated risk of future inappropriate sexual behavior relative to other groups. It is possible that these two risk factors may in fact act synergistically (Abracen & Looman, 2004). The above does not constitute a comprehensive etiological theory of sexual offending. However, by examining the complex interrelationships between well-known risk factors, such data add depth to some of the more recent comprehensive theories of sexual offending that have listed these risk factors as being related to the commission of sexual assault (Beech & Ward, 2004).

Some recent data reported by our team on the RTCSOTP population (Abracen, Looman, & Langton, 2008) indicate that the presence of a history of alcohol abuse, as measured by the MAST, may interfere with the ability of the Hare Psychopathy Checklist–Revised (PCL-R; Hare, 1991, 2003) to accurately predict recidivism. Specifically, Abracen et al. (2008) observed that among sexual offenders with a significant history of alcohol abuse, those with high PCL-R scores do not recidivate at significantly higher rates than sexual offenders with low PCL-R scores. This is surprising in that the PCL-R has been shown either alone (see Hare, 2003 for a review) or in combination with other items (e.g., the PCL-R total score is included in the scoring of the SORAG) to be a state-of-the-art predictor of general or violent recidivism (Quinsey, Harris, Rice, & Cormier, 1998). The fact that a measure (i.e., the MAST) that has been shown to be a single-factor instrument (see Langevin & Lang, 1990) can alter the ability of the PCL-R to reliably distinguish between recidivists and nonrecidivists suggests the potential importance of this dynamic variable. These surprising findings cannot be accounted for based on the assumption that the PCL-R does not predict recidivism among the RTCSOTP population. We have previously demonstrated that, when scores on measures of substance abuse were not controlled, those offenders attending the RTCSOTP who score high on the PCL-R recidivate at significantly higher rates than those with low PCL-R scores (Looman, Abracen, Serin, & Marquis, 2005); however, this pattern is not observed among those attending the RTCSOTP with significant problems related to alcohol abuse as measured by the MAST. Such findings run contrary to the frequently observed observation that high PCL-R offenders recidivate at much higher rates than low PCL-R clients (see Hare, 2003 for a review).

The results related to offenders scoring high on the MAST reported by Abracen et al. (2008) certainly suggest that a history of alcohol abuse adds important information regarding risk of future offending. That is, even low-risk offenders with a history of alcohol abuse recidivated at relatively high rates.

Nonetheless, the question remains as to whether the MAST and/or the DAST add to the prediction of sexual or violent recidivism among a sample of high-risk sexual offenders once actuarial risk is controlled. Although the data reported by Abracen et al. (2008) indicate that a history of alcohol abuse interferes with the ability of the PCL-R to predict recidivism, such findings do not specifically address the issue of whether measures of substance abuse significantly add to the prediction of recidivism. That is, once actuarial assessed risk is accounted for, can measures of substance abuse significantly add to the prediction of recidivism?

As there are a number of risk-assessment instruments which are routinely administered at the RTCSOTP, the data were first analyzed to determine which of the risk-assessment measures administered provided the best estimate of recidivism for the RTCSOTP population. The measure with the best predictive accuracy was chosen for the purpose of subsequent analyses. Measures of alcohol and drug abuse, as measured by the MAST and the DAST, respectively, were then added to regression equations to determine if these instruments added to the prediction of actuarially determined risk. It was predicted that the MAST would add significantly to the prediction of sexual or violent recidivism as assessed by actuarial estimates of risk. This hypothesis is based on the findings of our previous work, where it has been observed that sexual offenders evidenced significantly higher levels of alcohol but not drug abuse. As well, our findings with reference to outcome for sexual offenders who receive both substance abuse and sex offender treatment (cited above) reinforce these findings and offer support for the hypothesis regarding alcohol abuse in the present study. As we have observed mixed results with reference to drug abuse, no predictions were made with reference to this variable.

Method

The sample initially consisted of all sexual offenders who were assessed and/or treated at the RTCSOTP. The RTCSOTP is operated by Correctional Service of Canada. The program is inpatient based and the mandate of the RTCSOTP is to offer treatment to sexual offenders deemed to be at high risk of recidivism (based on actuarial measures) and/or who present with significant treatment needs (see Abracen & Looman, 2004; Looman et al., 2005 for additional details). The RTCSOTP has adopted a cognitive-behavioral approach to treatment and lasts approximately 7 months. Offenders requiring additional treatment following the termination of the program are sometimes allowed to stay for additional individual therapy. Low functioning offenders have more recently been able to attend treatment specifically geared to their needs (though this program has neither been available on a consistent basis

nor been offered to all offenders who might benefit from such a program given limited resources). Those participating in treatment at the RTCSOTP attend both group and individual therapy consisting of approximately 12 hr of treatment per week. As well, there is 24-hr monitoring of client behavior, and treatment staff are informed of any problematic behaviors that occur in the evening or at other times when they are not present. All participants signed a consent form describing the nature of the RTCSOTP and were informed that the data collected might be used for research purposes. Participants were told that they could withdraw their consent to the assessment/treatment process at any time.

Data for 608 sexual offenders were available in the RTCSOTP database. Of these, follow-up data were available with reference to sexual/violent recidivism for a subsample of 397 offenders. Of this sample, data were analyzed for offenders on whom the following psychometric data were available.

Procedure and Measures

The Michigan Alcohol Screening Test (MAST). The MAST consists of 24 yes/no questions pertaining to lifetime use of alcohol (Selzer, 1971). Each item is scored 0 or 1, with scores of 10 or more indicating evidence of having had a severe drinking problem at some point in one's life. Although the original MAST includes 25 items, one item that was not assigned any score in the original MAST was deleted (Do you ever try to limit your drinking to certain times of the day or to certain places?). Total scores of 4 or above represent at least moderate difficulties related to alcohol abuse.

The Drug Abuse Screening Test (DAST). The DAST is similar to the MAST (Skinner, 1982). It consists of 20 yes/no questions, each scored 0 or 1. Scores of 11 or more indicate substantial problems with drug abuse.

Langevin and Lang (1990), who examined a large sample of male sexual offenders, have previously demonstrated that the MAST and the DAST could be treated as single factor tests. Alpha reliabilities for the MAST and the DAST were found to be very good in their study at or above .89 for both measures.

Static-99. The Static-99 (Hanson & Thornton, 2000) is a 10-item assessment instrument consisting of items that have been linked empirically to sexual or violent offence recidivism. Hanson, Morton, and Harris (2003) indicate that, aside from the Rapid Risk Assessment for Sexual Offence Recidivism Scale (RRASOR; whose four items are included in the Static-99), there have been more replication studies for the Static-99 than for other actuarial instruments commonly used with sexual offenders. The authors noted that, aside from the SORAG, the Violence Risk Appraisal Guide (VRAG; Quinsey

et al., 1998), the RRASOR, and the Static-99, they were only able to locate one or two replication studies for six other scales. Although other studies have since been published (e.g., Hanson & Morton-Bourgon, 2009; Looman, 2006), the Static-99 and the SORAG remain among the actuarial instruments with the largest number of replications studies available. Doren (2002) has noted the utility of the Static-99 in assessments where risk for sexual offence recidivism specifically is necessary.

SORAG. The SORAG was developed in Canada from the VRAG to predict violent recidivism among sexual offenders. It is made up of 14 items including lived with both natural parents until the age of 16, maladjustment at school, history of alcoholism, marital status, total nonviolent history score using the Cormier-Lang Classification Scale, total violent history score using the Cormier-Lang Classification Scale, number of previous sexual offences, were sex offences committed exclusively against female victims below age 14, and raw score on the PCL-R as well as other items.

Results

Table 1 contains the means and standard deviations with reference to a number of background data for the sample included in the present study. As can be seen from Table 1, the current sample consists of sexual offenders with an average of approximately 3 sexual convictions on their official record. We have previously argued (Abracen & Looman, 2006) that such a sample may be typical of groups who would be candidates for civil commitment proceedings in the United States and who, in virtually any jurisdiction, would be viewed as a high-risk, high-need sample.

Follow-up data were available on 397 of the offenders in the RTCSOTP database; however, due to missing data with reference to one or more dependent measures, analyses included below contain varying *N*s. Complete data were available for 250 offenders with SORAG scores. For analyses that included the Static-99, complete data were available on 243 participants. Average length of follow-up was 4.87 (*SD* = 3.29) years for sexual or violent recidivism which was the dependent measure used in all analyses unless noted otherwise. The terms serious and violent or sexual recidivism are used throughout the manuscript and both terms refer to officially recorded convictions for violent or sexual offences. All outcome data were based on officially recorded criminal convictions listed on the Royal Canadian Mounted Police (RCMP) Fingerprint Service (FPS) record. The RCMP FPS sheet consists of a record of all charges or convictions which have occurred anywhere in Canada. As opposed to countries where conviction data are only available

Table 1. Means and Standard Deviations (in parentheses) for Selected Background Data

Variable	Number	*M* (*SD*)
Number of sexual offence convictions	250	3.4 (4.8)
Number of previous violent nonsexual convictions	250	1.8 (2.3)
Number of previous serious (violent including sexual) convictions	250	5.0 (4.6)
Age of offender when he committed current offence	250	30.6 (8.7)

on a state-by-state or jurisdictional basis, the RCMP FPS record allows for a comprehensive summary of all convictions registered nationally in Canada. With reference to sexual offence recidivism, a rate of 9.2% was observed for the current sample (n = 381). The rate of violent recidivism for the current sample was 27% (n = 380). Follow-up was approximately 5 years with reference to both types of recidivism.

With reference to the MAST, the mean score for the sample was 8.6 (SD = 6.9, N = 250) which clearly corresponded to the problem drinking range. The mean score on the DAST was 5.5 (SD = 5.6, N = 250).

Outcome for the RTCSOTP was first calculated using ROC analyses to determine whether the SORAG or the Static-99 provided a more accurate estimate of risk of serious recidivism. These analyses were restricted to the 243 participants for whom Static-99 data were available. The MAST and the DAST were also included in these analyses to determine if prediction based on these single factor tests would also attain statistical significance. Table 2 contains the area under the curve and associated significance levels for these four measures. As can be seen from the table, the only measure which did not attain statistical significance was the STATIC-99. All three of the remaining measures predicted sexual or violent recidivism at statistically significant levels. The MAST and the SORAG proved to be the best predictors of recidivism in this sample. Nonetheless, the 95% confidence intervals were overlapping for all measures.

Given that the Static-99 was not a significant predictor of outcome for the RTCSOTP, this measure was not included in additional analyses, thus the 250 offenders for whom SORAG, MAST, and DAST data were available were used. To determine whether the MAST and the DAST added to prediction of serious recidivism over and above estimates based on the SORAG alone, a forward (conditional) logistic regression was performed. A test of the full

Table 2. Area Under the Curve for the Static-99, SORAG, MAST, and DAST

Measure	Area	*SE*	Asymptotic Significance	Asymptotic 95% CI
MAST	.637	.037	.000	.565-.709
DAST	.582	.039	.036	.506-.658
SORAG	.674	.036	.000	.604-.745
Static-99	.576	.038	.051	.501-.652

Note: SORAG = Sex Offender Risk Appraisal Guide; MAST = Michigan Alcohol Screening Test; DAST = Drug Abuse Screening Test; CI = confidence interval.

model with all 3 predictor variables against a constant-only model was statistically reliable $\chi^2(3, N = 250) = 26.84$, $p < .000$ indicating that the predictors as a set reliably distinguished between recidivists and nonrecidivists. With reference to percentage-correct classification for the three predictor variables against a constant-only model, 65.6% of offenders could be correctly classified as recidivists or nonrecidivists. Only nonrecidivists, but no recidivists, were correctly classified in this initial analysis. The SORAG was entered into the first step of the logistic regression which yielded a statistically significant result, $\chi^2(1, N = 250) = 20.85$, $p < .000$. Nagelkerke R^2 for Step 1 was .111 indicating that the model only accounted for a small degree of variance. Table 3 contains significance levels as well as the exponentiated values of the β coefficient (equivalent to the odds ratios) for the variables which were retained in the first and second steps of the model. Overall, the second step, which included retention of both the SORAG and the MAST, was significant, $\chi^2(2, N = 250) = 7.02$, $p < .008$ for the step, $\chi^2(2, N = 250) = 27.87$, $p < .000$ for the overall model, Nagelkerke $R^2 = .146$. The DAST was not retained in either model. For Step 1, the model accurately predicted 92.7% of nonrecidivists and 19.8% of recidivists with an overall correct classification of 67.6%. In Step 2, the associated levels were 88.4% correct classification for nonrecidivists and 30.2% correct classification for recidivists with an overall correct classification of 68.4%. Given that clinicians are most interested in accurately predicting who will recidivate, the final model, with an accurate prediction of approximately a third of recidivists, offers an improvement over the initial analyses where no recidivists were accurately predicted.

Table 3. Variables in the Equation for Logistic Regression

Variable	*B*	*SE*	Wald	*df*	Significance	Exp(*B*)
Step 1						
SORAG	.054	.013	17.965	1	.000	1.056
Step 2						
MAST	.054	.021	6.927	1	.008	1.056
SORAG	.049	.013	14.251	1	.000	1.050

Note: SORAG = Sex Offender Risk Appraisal Guide; MAST = Michigan Alcohol Screening Test.

Discussion

The present study examined the incremental validity of adding measures of substance abuse to actuarial risk-assessment tools in the prediction of serious recidivism among high-risk sexual offenders. The results indicate that considering alcohol abuse, but not other drug abuse, adds to the ability to predict reoffence over the SORAG score alone. It is important to note that the items of the SORAG already incorporate information related to alcohol abuse history. It may be that the manner in which this item accounts for alcohol abuse is inadequate, or alternatively, that the MAST assesses an underlying predisposition as opposed to a stricter historical assessment of a problem, as is done by the SORAG item.

The results of the present study need to be taken in context with other research related to substance abuse in sexual offenders (see Abracen et al., 2008 for a review). We have consistently found that sexual offenders demonstrate significantly higher scores on the MAST when compared to groups of violent nonsexual offenders. As well, we have observed that among high-risk sexual offenders with a significant history of alcohol abuse, the PCL-R fails to reliably distinguish between recidivists and nonrecidivists. When looking at the research related to convicted sexual offenders, such data are not unique. Hildebrand, de Ruiter, and de Vogel (2004) found that substance abuse/dependence remained a significant predictor for violent nonsexual offending even after controlling for psychopathy among the sexual offenders included in their study. More specifically, Långström et al. (2004) found that alcohol abuse more than doubled the risk of recidivism among their sample of sexual offenders. Drug abuse was also found to be a significant predictor of sexual recidivism, but only alcohol abuse was a significant predictor of violent recidivism as well.

Testa (2002), in her review of the literature, noted that studies report modest correlations between alcohol consumption and history of sexual offence perpetuation but that spurious effects may account for much of these effects. Nonetheless, as noted by Testa (2002), there have been very few studies on

convicted offenders. Boles and Miotto (2003), in their review of the literature, suggest that evidence from both laboratory and empirical studies support the possibility of a causal role of alcohol in violent behavior, though a host of other factors are clearly related to risk of violence over and above substance abuse.

In sum, there is mounting evidence that substance abuse, and in particular the abuse of alcohol, may be an important dynamic risk factor related to sexual offence recidivism. Prentky, Janus, Barbaree, Schwartz, and Kafka (2006) have recently suggested that researchers in the area of sexual offending should begin examining stable dynamic risk factors such as lifestyle instability. These authors note that such factors have a high degree of risk relevance, that they may be easily assessed, and that they can become treatment targets. The research reported here clearly supports the assertion of these authors. Substance abuse, clearly one aspect of lifestyle instability, can be easily assessed by such measures as the MAST and the DAST. Furthermore, data such as those reported above indicate that measures of substance abuse appear to be related to risk prediction. As well, a variety of programs have been developed to deal with the treatment of substance abuse. Perhaps the most significant challenge is to devise means whereby issues associated with substance abuse treatment can be seamlessly incorporated into sexual offender treatment programs. This may be of particular relevance for programs geared to higher risk, higher needs offenders among whom such criminogenic needs may be more common (see Andrews & Bonta, 2003 for a discussion regarding criminogenic needs).

Although we agree there is much to be recommended in the good lives model (Ward & Stewart, 2003; Ward, Vess, Collie, & Gannon, 2006) and its concomitant approach to treatment with sexual offenders, we believe that, especially with reference to higher risk sexual offenders, criminogenic needs related to lifestyle instability need to be directly targeted in treatment. We have previously demonstrated that for treated high-risk sexual offenders (Abracen & Looman, 2006; Looman, 2006), such approaches result in dramatically lower rates of serious recidivism than would be predicted based on actuarial estimates. We have also observed when treated sexual offenders are compared to untreated matched comparison participants (Looman, Abracen, & Nicholaichuk, 2000), such approaches result in significantly lower rates of sexual offence recidivism.

The data reported here as well as in some of the research cited above raise the possibility that substance abuse, and in particular alcohol abuse, might be best viewed as a stable dynamic risk factor that should be directly targeted in sex offender treatment programs given its association with risk. That is, a history of alcohol abuse appears to significantly increase risk of serious recidivism over and above estimates based on actuarial instruments alone. By

addressing issues associated specifically with sexual offence recidivism in comprehensive treatment programs, it is possible that we may achieve better outcomes than have been observed to date. From a clinical perspective, addressing the way in which risk factors work together in the same program may allow offenders to better integrate the material presented. For example, the substance abuse treatment programs offered by Correctional Service of Canada typically do not discuss how alcohol abuse may be related to cognitive distortions related to sexual offending (at least among individuals predisposed to such thoughts).

We have previously argued that alcohol abuse and intimacy deficits seen in sexual offenders may act synergistically (Abracen & Looman, 2004) in that both alcohol abuse and the intimacy deficits seen in sexual offenders are associated with negative emotionality. If true, this would provide a theoretically meaningful link between two well-known risk factors for sexual offence recidivism. As well, treatment that focuses on negative emotionality might presumably have a positive impact on both the ability to develop and maintain intimate relationships and the risk of relapse for alcohol abuse. For example, Hull and Slone (2004) note that a number of studies have implicated negative affect in response to interpersonal difficulties as being closely related to motivation to consume alcohol (see Hull & Slone, 2004 for a review of information related to negative emotionality and alcohol abuse). As well, these authors discuss the reciprocal relationship between drinking and negative affect such that negative emotions (e.g., sadness or hostility) in the context of few or poor-quality intimate relationships leads to drinking which, in turn, predicts subsequent increases in sadness and hostility. These findings suggest that issues specific to relationships and substance abuse should also be specifically addressed in treatment. In practice, we have incorporated treatment strategies directly related to all three of these dynamic risk factors (i.e., intimacy deficits, negative emotionality, alcohol abuse) in the programs that the authors run in both the institution and the community. The long-term outcome studies that we have conducted speak to the apparent efficacy of these approaches.

In summary, research evidence is beginning to accumulate to suggest that substance abuse, an in particular alcohol abuse, may represent an important risk factor for sexual offence recidivism. Alcohol abuse, as measured by the MAST, predicts violent (including sexual) recidivism, even after accounting for actuarial risk as measured by a state-of-the-art measure of sexual offender risk assessment. Such findings add to the literature that measures of dynamic risk may contribute to the further refinement of risk prediction and treatment strategies among sexual offenders.

Authors' Note

The views expressed in the current article are those of the authors and do not necessarily reflect the views of Correctional Service of Canada.

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References

Abbey, A. (1991). Acquaintance rape and alcohol consumption on college campuses: How are they linked? *American Journal of College Health, 39*, 165-170.

Abracen, J., & Looman, J. (2004). Issues in the treatment of sexual offenders: Recent developments and directions for future research. *Aggression and Violent Behavior, 9*, 229-246.

Abracen, J., & Looman, J. (2006). Evaluation of civil commitment criteria in a high risk sample of sexual offenders. *Journal of Sexual Offender Civil Commitment: Science and the Law, 1*, 124-140.

Abracen, J., Looman, J., & Anderson, D. (2000). Alcohol and drug abuse in sexual and nonsexual violent offenders. *Sexual Abuse: A Journal of Research and Treatment, 12*, 263-274.

Abracen, J., Looman, J., Di Fazio, R., Kelly, T., & Stirpe, T. (2006). Patterns of attachment and alcohol abuse in sexual and non-sexual violent offenders. *Journal of Sexual Aggression, 12*, 19-30.

Abracen, J., Looman, J., & Langton, C. M. (2008). Treatment of sexual offenders with psychopathic traits: Recent research developments and clinical implications. *Trauma, Violence & Abuse, 9*, 144-166.

Andrews, D. A., & Bonta, J. (2003). *The psychology of criminal conduct* (3rd ed.). Cincinnati, OH: Anderson.

Baltieri, D. A., & Guerra de Andrade, A. (2008). Drug consumption among sexual offenders against females. *International Journal of Offender Therapy and Comparative Criminology, 52*, 62-80.

Beech, A. R., & Ward, T. (2004). The integration of etiology and risk in sexual offenders: A theoretical framework. *Aggression and Violent Behavior, 10*, 31-63.

Begin, P., Weekes, J., & Thomas, G. (2006). The Canadian addiction survey: Substance use and misuse among the Canadian population. *Forum on Corrections Research, 18*, 12-18.

Boles, S. M., & Miotto, K. (2003). Substance abuse and violence: A review of the literature. *Aggression and Violent Behavior, 8*, 155-174.

Christie, M. M., Marshall, W. L., & Lanthier, R. D. (1979). *A descriptive study of incarcerated rapists and pedophiles*. Report to the Solicitor General of Canada, Ottawa, Ontario.

Doren, D. M. (2002). *Evaluating sex offenders: A manual for civil commitments and beyond*. Thousand Oaks, CA: Sage.

Douglas, K., & Skeem, J. (2005). Violence risk assessment: Getting specific about being dynamic. *Psychology, Public Policy & Law, 11*, 347-383.

Felson, R. B., Burchfield, K. B., & Teasdale, B. (2007). The impact of alcohol on different types of violent incidents. *Criminal Justice and Behavior, 34*, 1057-1068.

Hanson, R. K. (2006). Stability and change: Dynamic risk factors for sexual offenders. In W. L. Marshall, Y. M. Fernandez, L. E. Marshall, & G. A. Serran (Eds.), *Sexual offender treatment: Controversial issues* (pp. 17-32). Chichester, UK: John Wiley.

Hanson, R. K., Morton, K. E., & Harris, A. J. R. (2003). Sexual offender recidivism risk: What we know and what we need to know. *Annals of the New York Academy of Science, 989*, 154-166.

Hanson, R. K., & Morton-Bourgon, K. E. (2009). The accuracy of recidivism risk assessments for sexual offenders: A meta-analysis of 118 prediction studies. *Psychological Assessment, 21*, 1-21.

Hanson, R. K., & Thornton, D. (2000). Improving risk assessment for sex offenders: A comparison of three actuarial scales. *Law and Human Behavior, 24*, 119-136.

Hare, R. D. (1991). *Manual for the Revised Psychopathy Checklist*. Toronto, Ontario, Canada: Multi-Health Systems.

Hare, R. D. (2003). *The Hare Psychopathy Checklist–Revised (PCL-R)* (2nd ed.). Toronto, Ontario, Canada: Multi-Health Systems.

Hildebrand, M., de Ruiter, C., & de Vogel, V. (2004). Psychopathy and sexual deviance in treated rapists: Association with (sexual) recidivism. *Sexual Abuse: A Journal of Research and Treatment, 16*, 1-24.

Hull, J. G., & Slone, L. B. (2004). Alcohol and self-regulation. In R. F. Baumeister & K. D. Vohs (Eds.), *Handbook of self-regulation: Research, theory, and applications* (pp. 466-491). New York: Guilford.

Kingston, D. A., Firestone, P., Wexler, A., & Bradford, J. M. (2008). Factors associated with recidivism among intrafamilial child molesters. *Journal of Sexual Aggression, 14*, 3-18.

Klostermann, K. C., & Fals-Stewart, W. (2006). Intimate partner violence and alcohol use: Exploring the role of drinking in partner violence and its implications for intervention. *Aggression and Violent Behavior, 11*, 587-597.

Langevin, R., & Lang, R. A. (1990). Substance abuse among sex offenders. *Annals of Sex Research, 3*, 397-424.

Langevin, R., Langevin, M., Curnoe, S., & Bain, J. (2006). Generational substance abuse among male sexual offenders and paraphilics. *Victims & Offenders, 1*, 395-409.

Långström, N., Sjöstedt, G., & Grann, M. (2004). Psychiatric disorders and recidivism in sexual offenders. *Sexual Abuse: A Journal of Research and Treatment, 16*, 139-150.

Looman, J. (2006). Comparison of two risk assessment instruments for sexual offenders. *Sexual Abuse: A Journal of Research and Treatment, 18*, 193-206.

Looman, J., Abracen, J., Di Fazio, R., & Maillet, G. (2004). Alcohol and drug abuse among sexual and non-sexual offenders: Relationship to intimacy deficits and coping strategy. *Sexual Abuse: A Journal of Research and Treatment, 16*, 177-190.

Looman, J., Abracen, J., & Nicholaichuk, T. P. (2000). Recidivism among treated sexual offenders and matched controls: Data from the Regional Treatment Centre (Ontario). *Journal of Interpersonal Violence, 15*, 279-290.

Looman, J., Abracen, J., Serin, R., & Marquis, P. (2005). Psychopathy, treatment change and recidivism in high risk high need sexual offenders. *Journal of Interpersonal Violence, 20*, 549-568.

Marlatt, G. A. (Ed.). (1998). *Harm reduction: Pragmatic strategies for managing high-risk behaviors*. New York: Guilford.

Marshall, W. L. (1989). Invited essay: Intimacy, loneliness and sexual offenders. *Behaviour Research and Therapy, 27*, 491-503.

Marshall, W. L. (1993). The role of attachment, intimacy, and loneliness in the etiology and maintenance of sexual offending. *Sexual and Marital Therapy, 8*, 109-121.

Pernanen, K. (1991). *Alcohol in human violence*. New York: Guilford.

Prentky, R. A., Janus, E., Barbaree, H., Schwartz, B. K., & Kafka, M. P. (2006). Sexually violent predators in the courtroom: Science on trial. *Psychology, Public Policy, and Law, 12*, 357-393.

Quinsey, V. L., Harris, G. T., Rice, M. E., & Cormier, C. A. (1998). *Violent offenders: Appraising and managing risk*. Washington, DC: American Psychological Association.

Rada, R. T. (1975).Alcohol and rape. *Medical Aspects of Human Sexuality, 9*, 48-65.

Selzer, M. L. (1971). The Michigan alcoholism screening test: The quest for a new diagnostic instrument. *American Journal of Psychiatry, 127*, 1653-1658.

Skinner, H. A. (1982). The drug abuse screening test. *Addictive Behaviors, 7*, 363-371.

Steele, C. M., & Josephs, R. A. (1990). Alcohol myopia: Its prized and dangerous effects. *American Psychologist, 45*, 921-933.

Testa, M. (2002). The impact of men's alcohol consumption on perpetuation of sexual aggression. *Clinical Psychology Review, 22*, 1239-1263.

Ward, T., & Stewart, C. A. (2003). Good lives and the rehabilitation of sexual offenders. In T. Ward, D. R. Laws, & S. M. Hudson (Eds.), *Sexual deviance: Issues and controversies* (pp. 21-44). London: Sage.

Ward, T., Vess, J., Collie, R. M., & Gannon, T. A. (2006). Risk management or goods promotion: The relationship between approach and avoidance goals in treatment for sex offenders. *Aggression and Violent Behavior, 11*, 378-393.

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